

THE CLAIMS

The text of all pending claims, including withdrawn claims, is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (PREVIOUSLY PRESENTED) A method of detecting an abnormal video signal in a display device, comprising:

selecting an R, a G, or a B component of an R,G,B signal including a video signal as a selected R,G,B component and setting a region of the selected R,G,B component to be checked;

detecting a minimum pixel level value in the checked region of the selected R,G,B component;

comparing the minimum pixel level value for the selected R,G,B component with a predetermined threshold value and checking if an abnormal R,G,B component is present; and

displaying on a screen a message indicating whether the selected R,G,B component includes an abnormal video signal.

2. (PREVIOUSLY PRESENTED) The method of claim 1, wherein the comparing comprises:

setting a flag which indicates whether the selected R,G,B component is abnormal when the minimum pixel level value is smaller than a predetermined threshold value, and

resetting the flag when the minimum pixel level value is larger than the predetermined threshold value.

3. (PREVIOUSLY PRESENTED) The method of claim 1, wherein the displaying comprises:

checking whether a flag indicating whether the selected R,G,B component is abnormal is set;

checking if a video signal checking function is enabled when the flag is set; and

setting how long the message will be displayed and how long a predetermined warning message is displayed, when enabling of the video signal checking function is confirmed.

4. (PREVIOUSLY PRESENTED) A display device comprising:

a signal inputting unit receiving R,G,B signals including video signals, a horizontal synchronization signal, and a vertical synchronization signal;

a minimum value detector detecting a minimum pixel level value in a particular region of a selected R,G,B component input from the signal inputting unit, the selected R,G,B component being an R, a G, or a B component of the received R,G,B signals;

a controller comparing the minimum pixel level value with a predetermined value and checking whether the selected R,G,B component includes an abnormal video signal; and

a warning message indicating an abnormal state of the selected R,G,B component as determined by the controller.

5. (PREVIOUSLY PRESENTED) The display device of claim 4, wherein the minimum value detector comprises:

a signal selector selecting one of the received R,G,B component;

a storage unit stores the minimum pixel level value detected in the particular region of the selected R,G,B component; and

a comparator comparing the minimum pixel level value in the particular region of the selected R,G,B component with a stored minimum pixel level value detected in a particular region of a previous R,G,B component, and thereby detects the minimum pixel level value .

6. (ORIGINAL) The display device of claim 4, wherein the controller generates an on-screen-display (OSD) signal that enables and disables an R,G,B, signal checking function .

7. (PREVIOUSLY PRESENTED) A method of detecting an abnormal video signal in a display device, comprising:

receiving R,G,B signals including video signals from a host;

detecting a minimum pixel level value of an R,G,B, component selected from the received R,G,B signals, the selected R,G,B, component being an R, a G, or a B component of the received R,G,B signals;

determining if the selected R,G,B component is abnormal based on a comparison between the minimum pixel level value in the selected R,G,B component and a predetermined value; and

displaying on a screen a message indicating whether the selected R,G,B component includes an abnormal video signal.

8. (PREVIOUSLY PRESENTED) The method of claim 7, wherein the determining comprises:

comparing the minimum pixel level value within the selected R,G,B component with the predetermined value;

extracting a minimum pixel level value when the pixel level value in the selected R,G,B component is smaller than the predetermined value.

9. (PREVIOUSLY PRESENTED) The method of claim 7, wherein the determining comprises:

setting a flag indicating whether the selected R,G,B component is abnormal when the minimum pixel level value is smaller than the predetermined value, and

resetting the flag when the minimum pixel level value is larger than the predetermined value.

10. (PREVIOUSLY PRESENTED) The method of claim 7, wherein the displaying comprises:

checking whether a flag indicating whether the selected R,G,B component is abnormal is set;

checking if a video signal checking function is enabled when the flag is set; and

setting how long the message will be displayed and how long a predetermined warning message is displayed on the screen when the video signal checking function is enabled.

11. (PREVIOUSLY PRESENTED) A display device comprising:

a signal inputting unit receiving R,G,B video signals;

an abnormal state detector detecting an abnormal video signal in an R,G,B component selected from among the received R,G,B signals based on a comparison of a detected pixel level value of the R,G,B component and a predetermined value, the selected R,G,B component being an R, a G, or a B component of the received R,G,B signals; and

a warning message indicator indicating whether an abnormal video signal is detected.

12. (PREVIOUSLY PRESENTED) The display device of claim 11, wherein the abnormal state detector comprises:

a minimum value detector detecting a minimum pixel level value in the selected R,G,B component; and

a controller which compares the minimum pixel level value with a predetermined value and checks if the selected R,G,B component is abnormal.

13. (PREVIOUSLY PRESENTED) The display device of claim 12, wherein the minimum value detector comprises:

a signal selector selecting one of the received R, G, B components;

a storage unit storing the minimum pixel level value detected in the selected R,G,B component;

a comparator comparing the minimum pixel level value in the selected R,G,B component with a minimum pixel level value detected in a previous signal, and extracts a minimum pixel level value.

14. (PREVIOUSLY PRESENTED) The display device of claim 12, wherein the controller generates a set flag when an abnormal signal is detected.

15. (PREVIOUSLY PRESENTED) The display device of claim 11, wherein the controller generates an on-screen-display (OSD) signal that enables or disables a signal checking function.